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The Machine Industry of Tientsin
Chi-chieh Chih-tsao, Hsiao Tai,
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TIENTSIN'S MACHINE-BUILDING INDUSTRY

Hsiao Tai

1. A HISTORY OF VIOLENT CHANGE

The machine-building industry is the basis of all other industries; it is vitally important to the development of industry as well as agriculture. In fact, farm implements, irrigation machinery and the electric motors used in farming are all products of the machine-building industry; hence, the machine-building industry holds the key to the industrialization of China.

Tientsin is the largest machine-building center in North China. Even before 1927 there were in Tientsin more than 100 private small-scale machine manufacturers. These manufacturers used very primitive methods and produced only a limited variety of goods, consisting mainly of farm implements and machine parts, not whole machines. After 1927, as science progressed private large-scale machine-building began to develop. For instance, the Te-tai-hsing Metal Plant and a few others could produce at that time various machines such as printing presses, cotton gins, rubber processing machines, flour mills, paper manufacturing machines and others. The Japanese made large investments in North China, including the establishment of a large rubber products manufacturing plant in 1930 and a plant to produce bicycle parts and safes in 1936. By 1937 Tientsin had more than 140 machine-building plants. In 1941 the Japanese set up the Feng-tien Automobile Plant in Tientsin, equipped with about 800 machine tools, which made it the

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largest industrial plant in North China. As the Japanese developed such war industries as arms repair in North China, about 100 machine-building and repair plants including metal fabricating plants were created. These plants numbered nearly 300. Some of these plants were grouped around the Three-Stone-Broadway of Tientsin, which is still a center of small-scale machine-building plants.

When the Japanese surrendered, the Kuomintang took over Tientsin. Having illusions about the Kuomintang regime and thinking that a peaceful life would soon be possible, many people made industrial investments, and as a consequence about 100 machine-building plants were established at the time. However, owing to the Kuomintang's traditional policy of oppressing private industry, and owing to the monopolistic control set up by the bureaucratic capitalists, Tientsin's private industry faced unprecedented difficulties and began to collapse: more than half of the plants suspended operation and only one-fourth of the 2,000 machine tools continued in use. In the meantime, the rural economy was also deteriorating due to inflation and high living costs. Under these circumstances the demand for machines and machine parts was extremely limited; even the enterprises controlled by the Kuomintang regime could not escape the widespread industrial crisis.

Since the liberation of Tientsin the People's Government has taken various measures to develop production and bring about a prosperous economy. Its policies take into account both public and private interests -- to benefit both labor and capital and to

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increase the circulation of goods between city and countryside. With full government support the Tientsin's machine-building industry has once again survived the crisis.

II. A BRIEF DESCRIPTION OF TIENSIN'S MACHINE-BUILDING INDUSTRY

Tientsin's machine-building industry consists of 450 plants: 363 are equipped with heavy machinery; the rest are handicraft shops of little value to the machine-building industry. Among the larger plants, eight can produce machine tools; 17, cotton ginning and spinning machines, noodle-making machines, and various farming implements; 8, vertical steam engines and oil motors; 19, hose, shirt, and glove manufacturing machines; 16, vegetable oil extracting machines; 20, rubber products manufacturing machines, shoe-making machines, cigarette machines, matches-making machines, printing presses, egg-processing machines, candy-making machines; 133, machine repairing; 7, automobile parts and repairing; and 49, bicycle parts. The names of the largest plants are the Tientsin Machine-Building Company, the Tientsin Bicycle Plant, the Tientsin Rubber Goods Plant, and the Tientsin Automobile Assembly Plant, all affiliated with the state-owned North China Machine Building Enterprise; these plants are equipped with 900 machine tool units, constituting one-third of Tientsin's total number of machine tools. There are some large machine-building plants owned by the State: the China Textile Machine-Building Company, which has five plants producing mostly

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textile machine parts, the Tientsin Steel Enterprise (under the jurisdiction of the Heavy Industry Department) which has three plants manufacturing wire, screws, and nails, and the Tientsin Machinery Plant (under the jurisdiction of the Tientsin City Bureau of Public Enterprises). Privately-owned plants such as the Kuo-tien-chen and the New North China Machinery plant also produce various machines and machine parts.

In the past 1½ years, since the liberation, the machine-building industry of Tientsin has made great progress both in output and in production technique. For instance, the North China Machine-Building Enterprise has increased its production of the following goods: Feng-tien type cotton weaving machines -- from 20 units, the highest monthly production record before the liberation, to the present 33 units; pistons -- from 650 monthly to 3,300; 10-50 horsepower cigarette machines -- from 3 units monthly to 5 units. A few statistics on machine production in 1949 follow: flour mills -- 857 units, an increase of 66.7 percent over 1948; rubber manufacturing machines -- 49 units, an increase of 69 percent; vegetable oil extracting machines -- 36 percent above 1948; farming implements -- 162.3 percent increase; dyeing machines and weaving machines -- 66.8 percent; hose machines -- 66.9 percent; and communication equipment -- 149 percent. On the average, machine production in 1949 was 88 percent higher than 1948.

III. NEW DEVELOPMENTS

As a result of the governments new financial and economic

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regulations effective this year, prices all over the nation were stabilized at a new level. Like many other industries, the machine-building industry was confronted with difficulties. Plants which lived on speculative activities in the past were forced to go out of business. Some plants could not find buyers and suspended operation, since the village people still had very low buying power, while other industries were also confronted with similar depression. However, things began to improve after the Machine-Building Industry Conference held on 22 May. At this conference, the larger plants in various areas of China received purchase orders for their products. Purchase orders received by the machine-building industry of Tientsin amounted to 80 percent of its output. Since the conference adjourned, more and more purchase orders have been coming to Tientsin. For instance on the recommendation of the Tientsin Trust Company, the Northeast China Industry Division, the Trade and Commerce Division, and the Tai-yuan and Cheng-chow Railroad Bureaus have placed orders with the machine-building plants in Tientsin. The orders from the Cheng-chow Railroad Bureau, which amounted to 4 billion people yuan, have kept dozens of plants in operation. Orders from the Northeast China Industry Division, which included 195 tons of metal wire in various sizes worth 1,290 million people's yuan, have kept four plants, including the Chen-yu Machinery Plant in operation for a whole month. In order to meet the new circumstances, some plants have changed their business methods. A joint business organization for collective purchasing and marketing has been set up by 345 privately-owned machine-building plants. Furthermore, a collective contract has been signed

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through a labor-management consultative conference composed of 5 delegates chosen from labor and management. It is stipulated in the constitution of the labor-management consultative conference that "on the basis of democracy, equality, and mutual willingness, labor and management will consult one another to solve the production and labor problems of this industry and develop production in the interests of both labor and management." Since all these new measures were taken, Tientsin's machine-building industry has survived the recent difficulties and regained its strength. Recently the Heavy Industry Department of the Central People's Government allocated a large volume of purchase orders to Tientsin's machine-building plants; these orders were from the Agriculture, Railroad, and Textile Industry departments. They consist of 2,500 tons of various goods including 2,000 seed sowing machines, 14,000 Liberation-type irrigation machines, 300 switch boards, 4 electric generators, and 200 units of various farming machines. All these purchases will keep the machine-building industry in full operation for 3 months. Orders for flour mills are also in a volume sufficient to keep the flour-mill building plants running for 3 months. Indeed, these purchase orders have greatly stimulated Tientsin's machine-building industry. When the new wheat crop comes to the market this year, the peasants' buying power will improve. Furthermore, industry in general is recovering. It is clear that the machine-building industry has a very promising future. But we must continue to do our best.

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